

therebetween. Numerous other arrangements may be readily devised by those skilled in the art which will embody the principles of the invention and fall within the spirit and scope thereof.

Having described the invention, what I claim as new and desire to secure by

5 Letters Patent is:

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1. A universal automatic, self-adjusting chuck for holding and positioning an auto wheel, or the like, comprising:

(a) a turntable means having at least three radially-disposed slots therein with equidistant angles therebetween;

(b) a hollow drive shaft means one end of which is centrally secured to the turning table means for rotating the turntable means;

(c) at least three jaws for retention of the auto wheel, the jaws being movably operable within their respective radially-disposed slots in the turntable means and each of the jaws having a threaded receptacle therein;

(d) bearing means having an inner race and an outer race with bearings housed therebetween, the inner race being operably mounted on the drive shaft means;

(e) annular disk means having a centrally located receptacle therein with a annular rim thereabout having a inner diameter smaller than the other inside diameter of the receptacle, the receptacle adapted to operably receive and mount the outer race of the bearing means therein. the disk means having at least three equidistant threaded receptacles for receiving fasteners therein: whereby the disk means is rotatably movable independently of the rotating movement of the drive shaft means;

(f) at least three longitudinal position control arms for positioning the jaws in the slots in the turntable, each having a pair of oppositely disposed ends with an aperture in each end thereof;

(g) a plurality of threaded fastening means for operative pivotal engagement with each of the apertures in the arms, each of the fastening means being threadably anchored to one of the gripping means and threadably mated to one of the equidistant threaded receptacles in the annular disk whereby each of the ends of the longitudinal arms is pivotally movable thereabout ; arms mountable in each of the apertures of the arms and

(h) a stop means located on the shaft for preventing lateral movement between the shaft means and the inner race of the bearing means;

(i) a locking arm means for locking the disk means in position, the locking arm means having two oppositely-disposed ends, one end being fixedly mounted to the disk means with the locking arm means extending outwardly therefrom at an angle thereto, the other end having an aperture therein;

(j) a pneumatic actuator means having a housing means and a longitudinally-movable shaft means operably disposed within the housing means, the housing means having a receptacle mounted on one end of the housing means and at the opposite end of the housing means a clevis bracket means secured to the housing means a shaft means one end of which is operably disposed within the housing means and one end of which is operably disposed outside of the housing means, the shaft means adapted for extensible movement in and out of the housing means, the end of the shaft means operably disposed outside of the housing means having a clevis bracket for receiving a rod therein, the shaft means being extensibly operable by pneumatically-created forces operably delivered to the housing means;

(k) means for anchoring one end of the pneumatic housing means to the turntable means in pivotal relationship with the clevis bracket means mounted to the one end of the pneumatic housing means;

(l) means for receiving compressed air into the hollow drive shaft means and to deliver the compressed air therefrom to the pneumatic actuator means;

(m) means for pivotably securing the end of the movable shaft means of the pneumatic actuator means to the aperture in the locking arm means;

(n) at least three arm means each of which is adapted to be pivotally

secured at one end thereof to one of the at least three receptacle means in the disk and the opposite end of each of the at least three arm means being adapted to be pivotally secured to the complementary gripping means; and

(o) a spring means operably mounted between the turntable means and the annular disk

5 means positioning arm exert a tension biasing force therebetween.

2. The universal automatic, self-adjusting chuck for holding and positioning an auto wheel, or the like, of Claim 1 whereby the turntable means is secured to the drive shaft means by at least three equidistant threaded receptacles in one of the ends of the drive shaft means; therein, and has a centrally bored portion throughout the length thereof.